30. A NEW DISTRIBUTIONAL RECORD FOR *EUPATORIUM ADENOPHORUM* SPRENG. FROM TEHRI GARHWAL

During a recent survey of, 'The Flora of Tehri Garhwal,' *Eupatorium adenophorum* Spreng., a weed belonging to family Compositae was found growing in moist and shady situations at Vyasi, in the Tehri Garhwal, at an altitude of 455 metres. It is being reported for the first time from this region. This weed is a native of Mexico and Jamaica. It was introduced as a garden plant about 1924 but within recent years has run wild and naturalized.

The distribution of the taxon is not widespread in the area and its migration seems to be recent to the area.

Eupatorium adenophorum Sprengel, Syst. Veget. 3: 420, 1826; Koster in Blumea 1 : 502, 1935. Hara in Fl. E. Himal. 137, 1971.

An erect, perennial branched undershrub. Branches cylindrical, densely glandular hairy. Leaves opposite, petioled, sharply pointed, coarsely serrate above the cuneate base, 2.5-9 cm. long. Corymbs fastigiate trichotomous, flower heads clustered, white, pedicelled, 40-70 flowered, slightly fragrant, receptacle flat, involucral bracts about 20 in two rows, lanceolate. Corolla tube white, 1 mm., slender, abruptly dilated. Achenes black glabrous, slender, crowned by a pappus of 10-12 white scabrid hairs, twice as long.

Flowers and Fruits: March-July.

Specimen examined: Dhyani 115, 28-3-1976. Collected from Vyasi, Tehri Garhwal.

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I am indebted to Prof. Som Deva for his invaluable help.

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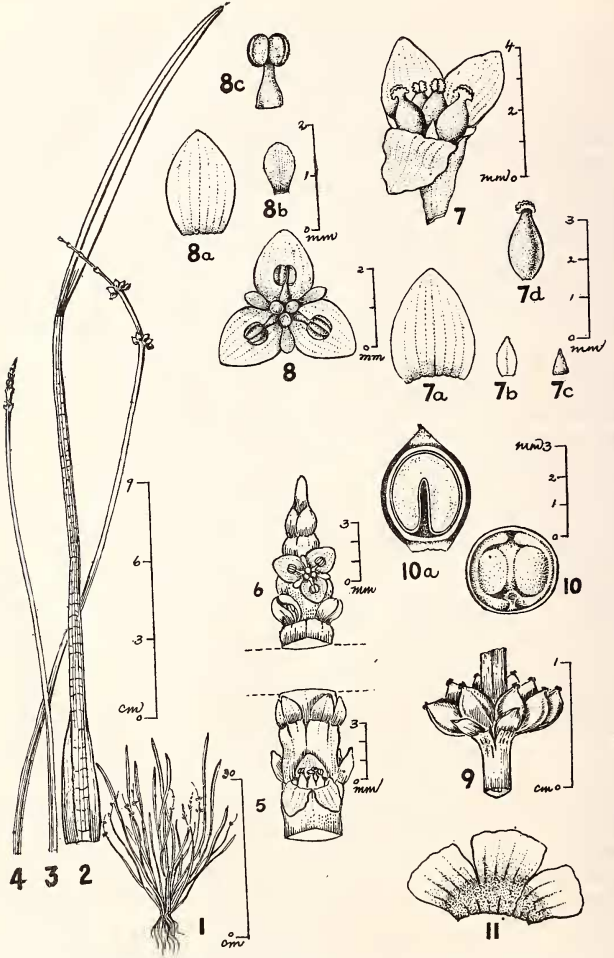
May 15, 1978.

31. *WIESNERIA TRIANDRA* (DALZ.) MICHELI (ALISMATACEAE) —AN INTERESTING AND RARE ADDITION TO THE FLORA OF THE PRESIDENCY OF MADRAS, FROM KERALA, SOUTH INDIA

(*With eleven text-figures*)

The genus *Wiesneria* Micheli is represented so far by four species throughout the world. Out of which only one species is recorded (from Konkan, Western Peninsula) in India hitherto. There is every possibility that an intensive search for them in pools and ponds of Kerala may result in the discovery of the other allied species as well. The present paper with its detailed description incorporating intraspecific variation and analytical sketches would definitely facilitate in the search. This is an addition to the flora of erstwhile Presidency of Madras and thus this present discovery extends its distribution to the Southern most part of India.

Wiesneria triandra (Dalz.) Micheli in A. DC. Monog. Phan. 3 : 82-83. 1881; Benth. & Hook. in Gen. Plant. 3: 1007. 1883; Hook.



Figs. 1-11. *Weisneria triandra* (Dalz.) Micheli: 1. Whole plant; 2. Single leaf; 3. Inflorescence; 4. Infructescence; 5. Basal portion of the inflorescence (♀ flower with sepals spreadout); 6. Terminal portion of the inflorescence (♂ flowers); 7. ♀ flower: 7a. sepal, 7b. petal, 7c. staminode, 7d. gynoecium; 8. ♂ flower: 8a. sepal, 8b. petal, 8c. stamen; 9. Fruits (young); 10. C. S. of young fruit; 10a. L. S. of young fruit. 11. Bract from young fruit, spreadout (not to scale).

f. Fl. Brit. India 6: 562. 1893. Buchenau in Engler, Pflanzenr. 16: 60-61. 1903; Cooke, Fl. Press. Bombay 3: 346-347. 1958. (rep. ed.) *Sagittaria triandra* Dalz. in Hook. Journ. bot. and Kew Gard. Misc. 2: 144. 1850; Dalz. & Gibs. Bombay Fl. 249. 1861.

Aquatic plants in shallow water in paddy fields, gregarious, semi-submerged, caespitose, monoecious, rooted. *Roots* many, long, white spongy. *Leaves* radical, numerous, long petioled, linear, lamina shorter than the petiole, ligulate; *petiole* ± 20.0×0.6 cm, constricted at the joint with the lamina, obtusely trigonous in cross section, aerenchymatous, broadened into a sheathing base; *lamina* ± 14.0×0.7 cm, linear, keeled especially towards the base, obtuse at tip. *Inflorescence* raceme, ± 20 cm long, with long peduncle and very short floriferous portion, axillary, shorter than leaves, erect; *peduncle* ± 18 cm long, obtusely trigonous; flowering axis sharply trigonous with unisexual flowers arranged at very short intervals; floriferous portion ± 2 cm long, narrow with 5 or 7 whorls; lower 2 (or 3) whorls with pistillate flowers (or very rarely 3rd whorl with both sex flowers) and upper whorls with staminate flowers, sometimes the upper most whorls sterile, intervals of whorls (especially the lower ones) elongating very much after fertilization. *Flowers* white, bracteate, trimerous. *Female flowers* shortly pedicellate; *bracts* three, connate at base, ± 3.0×2.0 mm, erect, trapezoid, truncate and subentire at apex, slightly accrescent; *sepals* three not spreading, ± 3.0×2.0 mm, erect, ovate, obtuse, slightly accrescent in fruit; *petals* three, alternating sepals, ± 1.0×0.5 mm, ovate or obovate to ligulate, obtuse, persistent; *pistils* 3 or 4 (rarely less), ± 2.0×0.75 mm, flask shaped; *ovary* globose to ovoid, abruptly narrowed into a short neck and ending in a bilobed stigma; lobes of stigma broadly auricular, warted on the receptive surface; *staminodes* three, triangular, ± 0.75 mm long, thick, acute. *Male flowers* about 3.5 mm across; *pedicel* ± 1.75 mm long; *bracts* three, similar to those of female flowers; *sepals* three, spreading, ovate to obovate, slightly connate at base, obtuse to rounded at tip, subequal, longer one ± 2.0×1.25 mm; other two sepals ± 1.5×1.0 mm; *petals* three, much smaller than sepals, as large as the petals of female flower, obovate, rounded at tip; *stamens* three, antisepalous, ± 1.5 mm long; *filaments* ± 1.0 mm long, dilated towards base; *anthers* large, conspicuous, basifixed, anther lobes reniform; *pistillodes* usually three, ovoid. *Young fruits* subglobose or ovoid with short apical beak, one seeded; *embryo* curved.

Specimens examined: *Joseph* 44444 (BSI/SC acc. nos. 85768 & 85769), fallow paddy fields, near Kottur dairy farm, Trivandrum District, Kerala, 27-9-1973, +300 m; *Stocks. Law* etc. *s.n.* (MH acc. no. 73292) Malabar, Concan etc.

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